

REMARKS

The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in better form for allowance. By this paper, claims 5, 16 and 21 have been cancelled. Therefore, upon entry of this amendment, claims 6-7, 10-12, 15 and 17-20 are pending in the application.

Response to Rejections under § 112

In the Office Action, claims 16 and 21 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 16 and 21 have been cancelled without prejudice to place the application in condition for allowance. Therefore, this rejection is now moot.

Response to Rejection of Claim 18

Claim 18 is directed to a nozzle adapted for mounting on the discharge chute of a walk-behind blower. In centrifugal-type blowers, the air velocity is generally higher in the lower (most distant radially) section of the shroud. This higher velocity air profile at ground level has a tendency to produce eddy currents and turbulence that causes leaves and debris being blown by the blower air stream to spin upward and circle back. The inventive nozzle includes a restriction in an upper portion of the nozzle that increases the velocity of the air flowing through the upper region of the nozzle at the outlet end. This configuration improves lateral displacement of leaves by knocking the leaves down and reducing the amount of leaves that circle back as a result of eddy currents formed in the discharged air. More particularly, claim 18 is directed to a nozzle comprising, *inter alia*:

wherein the shape of said channel at the inlet end is such that the cross-sectional area of an upper region of the channel located above a plane drawn midway between an upper wall and a lower wall of the nozzle body is substantially equal to the cross-sectional area of a lower region of the channel below the plane at said inlet end, and wherein the shape of the channel changes between said inlet end and said outlet end

such that the cross-sectional area of the upper region of the channel is smaller than the cross-sectional area of the lower region of the channel causing air from said blower to travel at a higher velocity in the upper region of the channel than air passing through the lower region of the channel at the outlet end.

Claim 18 in the application stands rejected as being unpatentable over Lauer et al. (U.S. Patent No. 6,253,416). Applicants respectfully traverse this rejection. Claim 18 is novel and patentable over the references of record, and particularly over Lauer et al., because the cited art does not show or suggest a nozzle having a channel shape such that the cross-sectional area at the inlet end of an upper region of the channel located above a plane drawn midway between an upper wall and a lower wall of the nozzle body is substantially equal to the cross-sectional area of a lower region of the channel below the plane at said inlet end, and wherein the shape of the channel changes between said inlet end and said outlet end such that the cross-sectional area of the upper region of the channel is smaller than the cross-sectional area of the lower region of the channel causing air from said blower to travel at a higher velocity in the upper region of the channel than air passing through the lower region of the channel at the outlet end as required by claim 6.

Lauer et al. discloses a walk-behind blower that has a maneuverable air stream director that can be controlled by the blower operator as the operator pushes the blower along a path of travel. The air stream director may be oscillated up and down to control the direction of the stream of air produced by the blower. The Examiner cites to Figs. 21 and 23 as showing a nozzle with a change of shape. However, the change in the shape of the nozzle in these Figures is symmetrical about the plane between the upper and lower walls of the nozzle at the inlet end. As can be clearly seen, the blower nozzle disclosed by Lauer et al. does not have a change in channel shape as required by claim 18 that would cause the air to travel at a higher velocity through the upper region of the channel than the air traveling through the lower region of the channel at the outlet end. Clearly, because the changes in the walls in the nozzle are symmetrical, the changes to the flow of air through the channel will also be substantially symmetrical. The Examiner contends that it would have been obvious to one having ordinary

skill in the art at the time of the invention was made to have achieved higher upper-to-lower air velocities in the blower nozzle of Lauer et al. by shaping the nozzle in any number of configurations. However, there is no motivation or suggestion to make such modification in the Lauer et al. reference to create a nozzle having variable velocity output. In fact, Lauer et al. actually teach away from the need for such a nozzle. As Lauer et al. illustrate in Figs. 12 and 13, the blower allows the operator to rapidly change the vertical angle of the air stream coming from the nozzle to knock down the leaf stack instead of increasing the velocity through the upper region. As illustrated, the operator allows the leaf stack to loft as a result of the eddy currents in the air stream (shown by reference number 153). The operator then moves the nozzle into an upwardly biased position to direct the air stream against the upper portion of the stack to blow the leaves in the lateral direction. ('416 patent, col. 8, line 60-col. 9, line 26; Figs. 9-13). Thus, the reference fails entirely to teach or suggest a nozzle as required by claim 18.

Accordingly, claim 18 is patentable over the cited art and prompt allowance of the claim is respectfully requested. Dependent claims 15 and 17 contain limitations similar to those of claim 18 and are therefore likewise patentable over the cited art.

Response to Rejection of Claim 6

Claim 6 is directed to a nozzle adapted for mounting on the discharge chute of a walk-behind blower. More particularly, claim 6 is directed to a nozzle comprising, *inter alia*:

a nozzle body being open at an inlet end and open at an outlet end, said inlet end and said outlet end being in flow communication through a channel formed in said nozzle body, said channel being associated with a first cross-sectional area at said inlet end, and said channel being associated with a second cross-sectional area at said outlet end, wherein said second cross-sectional area is less than said first cross-sectional area, the reduction in cross-sectional area being substantially caused by a change in the shape of the channel in an upper portion of the nozzle body, such that air velocity through an upper region of the channel is greater than the air velocity through a lower region of the channel at the outlet end.

Claim 6 in the application stands rejected as being unpatentable over Lauer et al. Claim 6 is novel and patentable over the references of record, and particularly over Lauer et al., because the cited art does not show or suggest a blower nozzle having a nozzle body that has a change in the shape of the channel in an upper portion of the nozzle body such that air velocity through an upper region of the channel is greater than the air velocity through a lower region of the channel at the outlet end as required by claim 6.

As set forth above, Lauer et al. discloses a walk-behind blower that has a maneuverable air stream director that can be controlled by the blower operator as the operator pushes the blower along a path of travel. The air stream director may be oscillated up and down to control the direction of the stream of air produced by the blower. As can be clearly seen, the blower nozzle disclosed by Lauer et al. does not have a restriction or a change in channel shape that would cause the air to travel at a higher velocity through the upper region of the channel than the air traveling through the lower region of the channel at the outlet end.

Accordingly, claim 6 is patentable over the cited art and prompt allowance of the claim is respectfully requested. Independent claim 10 contains limitations similar to those of claim 6 and is therefore likewise patentable over the cited art. Claims 7, 11-12, 15 and 17, depending directly or indirectly from one of claims 6 or 10, are submitted as patentable over the cited references for at least the same reasons.

Conclusion

In view of the remarks made herein, Applicant submits that the claims presented herein are patentably distinguishable from the art applied and prompt allowance of the application is respectfully requested.

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Should the Examiner determine that anything else is desirable to place this application in even better form for allowance, the Examiner is respectfully requested to contact the undersigned by telephone.

Respectfully Submitted,

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